

Customer No.:31561
Application No.:10/711,679
Docket No.:13838-US-PA

REMARKS

This is a full and timely response to the outstanding Office Action mailed Mar. 29, 2007. Applicant respectfully submits that claims 1 and 3-5 and 10-13 have been amended hereby, claims 2 and 6-8 have been canceled and new claims 14-17 have been added. Support to the changes of the claims and newly added claims can be found in the previously presented claims, disclosure and drawings and therefore no new matter issue has been raised. Reconsideration and allowance of the claims are respectfully requested.

Claim Rejections-35 U.S.C. 103

The Office Action rejected claims 1-3 and 7 under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. (US 2006/0070681) in view of Yang et al. (US 6,147,367).

In response thereto, Applicant has amended claim 1 to define in part:

A white LED device, comprising:

a first LED die.....

a second LED die.....

a phosphor layer disposed on at least one of the first and second LED dies.....;

an electrode connection structure,wherein the electrode connection structure comprises a packaging substrate defining a groove configured for receiving the first and second LED dies therein; and

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a light mixing structure..... the light mixing structure comprising a transparent packaging layer which comprises a first transparent material layer filled in the groove and enclosing the first LED die, the second LED die and the phosphor layer, and a second transparent material layer disposed on the first transparent material layer.....

In the Office Action, Examiner contended that Shimizu et al. disclose a white LED device including a first LED die 11, a second LED die 12, a phosphor layer 13 and the two LED dies disposed in the groove of the first electrode 14a and the transparent layer 13 filled the groove.

In the Office Action, Examiner explained the phosphor 13 as the phosphor layer and the transparent layer of the instant invention. However, in the instant invention as defined in amended claim 1, the phosphor layer and the transparent layer are two distinct elements, specifically, the phosphor layer is disposed on the first and/or second LED dies and acts as emitting a third color light when stimulated by the first or second color light while the first transparent material layer filled in the groove encloses the first and second LED die and the phosphor layer and acts as mixing the first to third color lights to produce white light. As such, Shimizu et al. fail to disclose *a first transparent material layer filled in the groove and enclosing the first LED die, the second LED die and the phosphor layer, and a second transparent material layer disposed on the first transparent material layer* of amended claim 1.

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Yang et al. also fail to disclose *a first transparent material layer filled in the groove and enclosing the first LED die, the second LED die and the phosphor layer, and a second transparent material layer disposed on the first transparent material layer* of amended claim 1.

Furthermore, in Shimizu, the phosphor 13 is disposed at the top of the alleged groove of the first electrode 14a. As such, it is impossible to fill transparent material layer in the groove of the first electrode 14a while allow the transparent material layer covering the phosphor. Therefore, even there exists a reference which discloses a transparent material layer filled in a groove formed in a packaging substrate, there is no suggestion/motivation to combine Shimizu and the reference.

Accordingly, amended claim 1 should be patentable over Shimizu et al., Yang et al and any other recited references. Reconsideration and withdrawal of the rejection and allowance of claim 1 is respectively requested.

Claim 3 should also be patentable since it depends on allowable claim 1 directly.

Claims 4, 5, 8 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. and Isokawa et al. (US 6,084,252) in view of Yang et al. and further in view of Suenaga (US2004/0120155). Claims 9-12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shimizu et al. and Isokawa et al. in view of Yang et al. and further in view of Chang et al. (TW 546854). Claim 13 is rejected under 35 U.S.C. 103(a) as being

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unpatentable over Shimizu et al., Isokawa et al. and Chang et al., as applied to claim 9 above, and further in view of Wang et al.(US 2006/0028122).

Applicant submits that claims 4, 5 and 9-13 depend on allowable claim 1, thus also be allowable.

Newly added claim 15 defines "*the first electrode frame defines a groove configured for receiving the first and second LED dies therein*" and "*a first transparent material layer filled in the groove and enclosing the first LED die, the second LED die and the phosphor layer, and a second transparent material layer disposed on the first transparent material layer,*" which are not disclosed by Shimizu et al. or Yang et al. or other recited references.

Accordingly, newly added claim 15 should be patentable.

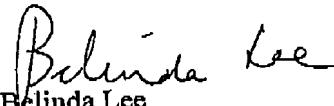
Claims 16-17 should also be patentable since they depend on allowable claim 15 directly.

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CONCLUSION

For at least the foregoing reasons, it is believed that the pending claims 1, 3-5 and 9-17 are in proper condition for allowance. If the Examiner believes that a telephone conference would expedite the examination of the above-identified patent application, the Examiner is invited to call the undersigned.

Date : June 26 , 2007


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